

REMARKS

I. CLAIMS 1-8 ARE GENERIC

As a preliminary matter, the Examiner's withdrawal of claims 1-8 is respectfully traversed because they are generic and should be examined regardless of the elected species as already admitted by the Examiner on page 2, paragraph 1, lines 1-2 of the Office Action dated April 2, 2003. In this regard, the title has not been amended as kindly suggested by the Examiner so as to embody article claims 1-8. Furthermore, it is respectfully requested that claims 11-13 be rejoined as they each include common allowable subject matter. For example, claim 11 is similar to claim 9 but simply defines additional features so as to further differentiate from the cited prior art (e.g., an electrical appliance including a housing and the use of lead free solder). Moreover, it is submitted that claims 1-8 are patentable over the cited prior art. For example, Asao does not disclose or suggest an "article having a circuit with parts, which are soldered by a *lead free* solder" nor "identification information indicating presence or absence of lead in said article" for the reasons discussed below, let alone the *combination* thereof.

II. INFORMATION DISCLOSURE STATEMENT

Further, the Examiner has not provided an *initialed* copy of the Information Disclosure Statement ("IDS") filed on July 11, 2001 indicating that the prior art listed in the IDS was formally considered and made of record. It appears the PTO-892 form listing prior art cited by the Examiner has made of record three of the references listed in the IDS. However, in order to ensure that all references are made of record, it is respectfully requested that the Examiner send an initialed copy of the IDS in the next Office Action indicating that all references listed therein have been considered and made of record.

III. CLAIMS 9 AND 10 ARE NOT ANTICIPATED BY ASAO

Claims 9 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Asao et al. (JP '834; hereafter, "Asao"). Claim 9 is independent. This rejection is respectfully traversed for the following reasons.

Claim 9 recites in pertinent part, a "recycling method of wastes containing an article having ... identification information indicating presence or absence of *lead* in said article, comprising: identifying wastes of *lead free* article" In contrast, Asao discloses only a process which determines the absolute magnitude of heavy metals *as a whole* that are present in the device, but does not provide "identification information indicating presence or absence of *lead*" specifically.

Although lead is a heavy metal, the alleged indication information of Asao does not differentiate lead from any other heavy metal. Accordingly, the process disclosed by Asao does not identify lead-free articles. For example, an article can have heavy metal content common in semiconductor devices (e.g., Sn, Bi, Au, Ag, etc.) *without* containing lead so that the bar code of Asao indicates only a heavy metal content *collectively* without identifying whether the article contains lead or not specifically. In short, the present invention can provide a direct and definitive determination of lead content; whereas JP '834 provides a direct determination of heavy metal content only, which at best indirectly reflects the *possibility* of lead content depending on which other heavy metals are used in the semiconductor device. As is well known in patent prosecution, "inherency may not be established by probabilities or possibilities" (see *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)).

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Asao does not anticipate claim 9, nor any claim dependent thereon.

IV. NEW CLAIMS

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

For example, new claims 14-20 are submitted to be allowable based on their own merits by adding novel and non-obvious features to the combination. For example, claims 14 and 15 recite in pertinent part, “wherein the identification information is recognizable by a human.” In contrast, Asao disclose only a bar code that requires a bar reading machine for recognizing its content (human does not interpret bar code).

Claim 16 recites in pertinent part, “a step of recycling a lead containing article having a circuit soldered with parts.” In contrast, Asao discloses separating the metal components from the printed circuit board so as to recycle only the unattached components having heavy metal content *without the circuit board*, thereby requiring mass redesign of

the circuit boards which increases complexity and cost. In fact, Asao is concerned only with recycling components having heavy metal content collectively without differentiation to lead, and moreover desires recycling of individual components rather than the packaged circuit board (i.e., Asao recycles by first separating the components from the circuit board and is based on the **total** heavy metal content). On the other hand, the present invention can provide a simple, efficient process which can recycle, for example, the circuit board together with the parts attached thereto by reference to the indication information regarding lead content. In short, Asao does not recycle the circuit board as a whole, let alone based on lead content. Instead, Asao recycles metal components only, based on total heavy metal content.

CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,
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